

AMENDMENTS TO THE CLAIMS

Please amend claims 1, 3, 5, and 6 and add claims 25-31 as follows.

Please cancel non-elected claims 2 and 8-24.

Listing of Claims:

Claim 1. (Currently Amended): An isolated nucleic acid molecule consisting essentially of comprising a nucleotide sequence selected from the group consisting of:

(a) ~~— a nucleotide sequence according to SEQ ID NOs:1, 3 and 5;~~

(b) ~~a nucleotide sequence having that is at least 85% identity identical to the nucleotide sequence according to set forth in SEQ ID NOs:1, 3 and 5~~ SEQ ID NO:5, wherein the nucleic acid molecule encodes a MMP-25 polypeptide that exhibits catalytic activity that is the same as that of a wild-type MMP-25 polypeptide comprising the amino acid sequence set forth in SEQ ID NO:6;

(c) ~~complements of a sequences according to SEQ ID NO:1, 3 and 5; and~~

(d) ~~sequences that hybridizes to a sequence according to SEQ ID NO:1, 3 and 5 under conditions of normal stringency.~~

Claim 2. (Cancelled)

Claim 3. (Currently Amended): A method of identifying a nucleic acid molecule encoding all or a part of a metalloproteinase MMP-25 polypeptide, comprising:

(1) hybridizing a nucleic acid molecule sample to ~~the nucleic acid molecule according to claim 1~~ an oligonucleotide encoding a peptide that consists of an amino acid sequence selected from the group consisting of amino acids at positions 1-61 of SEQ ID NO:6, amino acids at positions 98-111 of SEQ ID NO:6, and amino acids at positions 161-170 of SEQ ID NO:6; and;

(2) identifying a sequence ~~that hybridizes in said nucleic acid sample~~ that hybridizes to the oligonucleotide under high stringency conditions.

Claim 4. (Original): The method of claim 3, wherein the step of identifying includes performing a polymerase chain reaction to amplify said hybridizing sequence.

Claim 5. (Currently Amended): An expression vector comprising a nucleic acid molecule according to any one of claims 1 and 25-31 operably linked to an expression control sequence.

Claim 6. (Currently Amended): The vector of claim 5, wherein said vector is selected from the group consisting of a plasmid ~~vector~~vector, a phage ~~vector~~vector, a herpes simplex viral ~~vector~~vector, an adenoviral ~~vector~~vector, an adenovirus-associated viral ~~vector~~vector, and a retroviral ~~vector~~vector.

Claim 7. (Original): A host cell transformed or transfected with an expression vector according to claim 5.

Claims 8 - 24 (Cancelled)

Claim 25. (New): An isolated nucleic acid molecule consisting of a nucleotide sequence as set forth in SEQ ID NO:1, or the complementary sequence thereof.

Claim 26. (New): An isolated nucleic acid molecule comprising a nucleotide sequence as set forth in SEQ ID NO:3, or the complementary sequence thereof.

Claim 27. (New): An isolated nucleic acid molecule comprising a nucleotide sequence as set forth in SEQ ID NO:5, or the complementary sequence thereof.

Claim 28. (New): An isolated nucleic acid molecule that encodes a polypeptide comprising an amino acid sequence set forth in SEQ ID NO:4.

Claim 29. (New): An isolated nucleic acid molecule that encodes a polypeptide comprising an amino acid sequence set forth in SEQ ID NO:6.

Claim 30. (New): An isolated nucleic acid molecule encoding a MMP-25 polypeptide variant, wherein the variant comprises an amino acid sequence at least 90% identical to the sequence set forth in SEQ ID NO:6, and wherein the variant exhibits catalytic activity that is the same as that of a wild-type MMP-25 polypeptide comprising the amino acid sequence set forth in SEQ ID NO:6.

Claim 31. (New): An isolated nucleic acid molecule encoding a MMP-25 polypeptide variant, wherein the variant comprises an amino acid sequence at least 95% identical to the sequence set forth in SEQ ID NO:6, and wherein the variant exhibits catalytic activity that is the same as that of a wild-type MMP-25 polypeptide comprising the amino acid sequence set forth in SEQ ID NO:6.